



**3 NUTRITION SERVICES**

*Effective: 12/1/95*

**3.13 Nutrition Risk Determination: Measuring Length/Stature of Infants and Children**

*Revised: 5/17/04*

**POLICY:** Length or stature (height) measurements are required for certifications of all infants and children. Length and stature measurements must be done on-site, using standardized procedures and approved and properly maintained equipment (see Policies 3.50 and 3.51) unless measurements no more than 60 days old are available at the time of certification from another health care provider.

**PROCEDURE:**

**A. PROCEDURE FOR MEASURING LENGTH**

Measure infants, children under 24 months of age, and children age 24-36 months who cannot stand in the recumbent position (length) on a measuring board.

1. Equipment needed: Measuring board (see Policy 3.50) placed on a hard surface (so the footboard can slide), paper towels (recommended, optional), and a quaternary ammonium compound or a bleach solution mixed at a 1:10 dilution prepared daily.
2. At the beginning of the day, make sure the weighing area is clean, and all needed forms, equipment, and materials are available.
3. At a minimum, remove the infant/child's hat, any bulky clothes, shoes, and beads or barrettes on the top of the head that prevent doing the next step, in part 4, below. Line the board with paper towels (if used). Lay the infant/child face up on the measuring board. The body must be straight.
4. Have an assistant or the parent/caregiver hold the top of the head firmly against the headboard, with the line of vision straight up to the ceiling until the measuring is completed.
5. With one hand, hold the child's knees, completely straightening the hips and knees, assuring that the head, body, and feet are in a straight line.
6. With the other hand, move the footboard until it is resting firmly against both heels. The toes should point directly up.
7. Read the measurement to the nearest one-eighth inch.
8. Repeat the measurement procedure as indicated.



- a) Repeat the measurement if accuracy of the measurement is questionable (e.g., infant or child moved too much, the measurement might have been misread, the length is questionable based on current or past length-for-age plots, etc.) or if the health screener is new to the position and is still in training.
  - b) To measure again, it is recommended to remove the infant/child from the measuring board and lay the child down on it again. The WIC project must have a written policy that states the procedure used. Repeat the measurement procedure until two measurements agree within one-quarter inch. Use the larger of these two measurements.
9. Immediately record the measurement on the infant/child's growth chart. Hair arrangements (e.g., braids, pony tails) and hair accessories that could not be removed and that may have affected the accuracy of the measurement should be noted on the growth chart. Enter the measurement into the ADP system.
  10. Take infant or child off the measuring board. At least per family, use a new paper towel for lining the scale or, if towels are not used, clean with the quaternary ammonium compound or bleach solution, wipe down again, and let air dry. If soiled, discard paper (if used) and clean scale as stated above.
  11. At the end of the day, clean the board with the quaternary ammonium compound or bleach solution, and make sure that the area is neat, clean, and ready for use the next day.

## **B. PROCEDURE FOR MEASURING STATURE**

Measure the stature (height) of children age two years and over. If a child age 24-36 months cannot stand, follow the procedure in part A and document the reason the child was measured in the recumbent position in their file.

1. Equipment needed:
  - a) Flat metal or lexan tape and a block squared at a right angle. Attach the tape at the base of a flat wall with no baseboard or molding, or if there is a baseboard or molding, place a small platform or step stool squarely against the wall and extend the tape or board up from that surface. Assure the tape is straight up.
  - b) OR, permanent-mount stature measurement board (see Policy 3.50).
2. At the beginning of the day, make sure the measuring area is clean, and all needed forms, equipment, and materials are available.
3. Have the child remove his/her coat, shoes, hat, and beads or barrettes on the top of the head that prevent doing the step in part 5.



4. Have the child stand with heels slightly apart and back as straight as possible. Heels, buttocks, shoulder blades, and head should touch the wall or measuring tape. Eyes should be straight ahead, arms at sides, and shoulders relaxed. Be sure that the client's knees are not bent and that the heels are not lifted from the floor.
5. Slowly lower the headboard (or block squared at right angle) until it touches the top of the head firmly. Make sure it is not just resting on the hair, but is actually touching the top of the head and is level.
6. Check the child's position and read the height measurement to the nearest 1/8-inch. Moving the person out from under the headpiece to get the reading is recommended. The WIC project must have a written policy describing the procedure. Read the measurement at eye level. Hair arrangements and hair accessories that could not be removed and may affect the accuracy of the measurement should be noted on the growth chart.
7. Repeat the measurement as indicated.
  - a) Repeat measurements are needed if the stature measurement is questionable (e.g., the child moved too much or the stature measurement might have been misread, the height is questionable based on current or past stature-for-age plots, etc.) or if the health screener is new to the position and is still in training.
  - b) To measure again, it is recommended to remove the child from under the headboard or block and then have the child step back into place. The WIC Project must have a written policy that states the procedure used. Repeat the measurement procedure until two measurements agree within one-quarter inch. Use the larger of these two measurements.
8. Record the measurement on the growth chart. Enter the measurement into the ADP system.
9. At the end of the day, wipe down the headpiece or block with quaternary compound or bleach solution, and make sure the area is neat, clean, and ready for use the next day.

#### **C. INABILITY TO OBTAIN ACCURATE MEASUREMENTS**

1. Estimate as closely as possible (e.g., wouldn't stand still, if child has a cast).
2. Document in the participant's file (e.g., directly on the growth chart) that the measurement is an estimate and the reason why.



3. Do not use a length/height-related anthropometric risk factor unless the certifier is very sure a risk is present.
4. Enter the estimated length/height, if reasonably accurate, or the "unknown" code into the ADP system.

**D. SPECIAL TIPS**

1. Ask a child to "stand tall, take a deep breath and look straight ahead."
2. The measurer's eyes should be level with the headboard to avoid errors.
3. If the client has knock-knees, the inner borders of the knees should touch each other and the heels should be separated slightly.
4. If buttocks protrude so that the client must alter his/her position in an effort to get the buttocks, head, and shoulders against the measuring board or wall, the client should be positioned with only the buttocks in contact with the board or wall.
5. Errors to avoid:
  - a) Incorrect equipment or incorrect placement of tape or board (e.g., going over baseboard)
  - b) Footwear or headgear and beads or barrettes that prevent accurate measurements are not removed
  - c) Feet not straight and flat
  - d) Heels, buttocks, upper part of back, or back of head not pressed against recumbent board or wall
  - e) Knees bent
  - f) Body not straight; shoulders not straight
  - g) Participant's line of vision not straight to ceiling (recumbent measurement) or straight ahead (stature)
  - h) Headboard or block not firmly pressed onto top of head
  - i) Headboard or block moved before reading the measurement



- j) Placing footboard against one foot instead of both feet (thus, measuring one leg instead of both)
- k) Measuring recumbent length when holding one knee
- l) Measurement reading not recorded immediately
- m) Measurement not repeated as needed

**NOTES:**

Available resources:

- \* USDHHS Maternal and Child Health Bureau training modules, available at <http://depts.washington.edu/growth/> (can also be accessed at [www.cdc.gov/growthcharts](http://www.cdc.gov/growthcharts) or at [www.nal.usda.gov/wicworks](http://www.nal.usda.gov/wicworks), WIC Learning Center, Growth Charts)
- \* USDA, Food and Nutrition Technical Assistance: *Anthropometric Indicators Measurement Guide, 2003 Revised Edition*, available at [www.nal.usda.gov/wicworks](http://www.nal.usda.gov/wicworks), WIC Learning Center, Measuring and Weighing
- \* Videotape in Wisconsin WIC Health Screener Orientation Manual (first distributed to local WIC projects in 1997)